

# Datasheet

## Automatic Low Pressure Water Mist system

Model: **FIREKILL OH-DPD**



### Short Description

The **FIREKILL** Dry Nozzle Unit (OH-DPD) can be used in connection with the FIREKILL OH series of low pressure water mist nozzles.

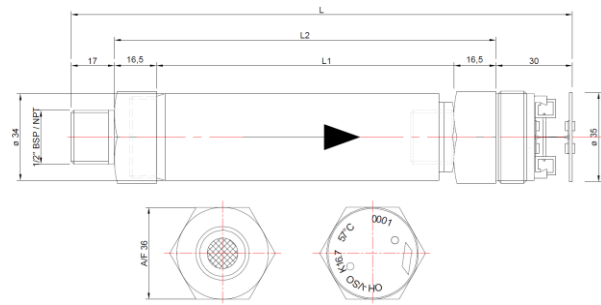
The OH-DPD Unit is typically installed on wet pipe systems where pipe connections are exposed to freezing conditions such as low pressure water mist drops from wet pipe systems into freezers or horizontal piping extensions to protected unheated areas, typically balconies in cold climate.

The OH-DPD unit has gone through an extensive component test in accordance with the requirements for low pressure water mist nozzles as described in IMO Re. A.800. The test is carried out in an ISO 17025 accredited laboratory.

### Note

The OH-DPD Unit shall be installed and maintained in compliance with the relevant OH-Nozzle type DIOM manual as well as with the applicable standard of the authority having jurisdiction (AHJ). Failure to do so may impair the performance of these devices and invalidate the operation of the fire suppression system.

The OH-DPD unit must only be installed in pipe fittings that meet the requirement of the OH-Nozzle type DIOM manual.



| General description    |                               |                 |             |          |
|------------------------|-------------------------------|-----------------|-------------|----------|
| Minimum water pressure | 4 bar                         |                 |             |          |
| Maximum water pressure | 16 bar                        |                 |             |          |
| K-factor (metric)      | Depending on nozzle fitted    |                 |             |          |
| Specific description   |                               |                 |             |          |
| Type                   | L                             | L1              | L2          | Weight*  |
| OH-DPD-150             | 197 mm                        | 117 mm          | 150 mm      | 0,70 kg  |
| OH-DPD-300             | 347 mm                        | 267 mm          | 300 mm      | 1,15 kg  |
| OH-DPD-450             | 497 mm                        | 417 mm          | 450 mm      | 1,50 kg  |
| OH-DPD-600             | 647 mm                        | 567 mm          | 600 mm      | 1,85 kg  |
| OH-DPD-750             | 797 mm                        | 717 mm          | 750 mm      | 2,20 kg  |
| Housing                | Stainless steel               |                 |             |          |
| Inlet                  | Naval brass with NiSn plating |                 |             |          |
| Inlet strainer         | Stainless steel               |                 |             |          |
| Internal valve         | Brass with NiSn plating       |                 |             |          |
| Finish brass parts     | NiSn plating                  |                 |             |          |
| Finish SS part         | Natural                       |                 |             |          |
| Nozzle data            |                               |                 |             |          |
| Nozzle type            | K-factor (metric)             | Min. pressure** | Max. height | Approval |
| OH-VSO                 | 16,7                          | 8 Bar           | 5,00 m      | FM       |
| OH-OS                  | 16,5                          | 10,5 Bar        | 5,00 m      | FM       |
| OH-L2                  | 14,5                          | 6 Bar           | 5,00 m      | DnV-GL   |
| OH-L1                  | 13,5                          | 6 Bar           | 2,50 m      | DnV-GL   |
| OH-L0                  | 7,0                           | 6 Bar           | 2,50 m      | DnV-GL   |
| OH-CO                  | 15,5                          | 6 Bar           | 2,50 m      | DnV-GL   |
| OH-SWC                 | 23,0                          | 6 Bar           | 2,50 m      | DnV-GL   |
| OH-SW                  | 12,5                          | 6 Bar           | 3,00 m      | DnV-GL   |
| OH-PX1 (Car park)      | 23,0                          | 6 Bar           | 5,00 m      | DnV-GL   |
| OH-PX1 (Storage)       | 23,0                          | 9 Bar           | 2,50 m      | DnV-GL   |
| OH-CA                  | 10,0                          | 6 Bar           | 2,50 m      | DnV-GL   |
| OH-CA1                 | 13,0                          | 6 Bar           | 2,50 m      | DnV-GL   |

\*Weight is total weight of the unit including the OH-Nozzle.

\*\*Min. pressure is the minimum pressure defined for the nozzle. When supplied in connection with an OH-DPD unit, the minimum pressure at the OH-DPD inlet shall be 0,5 bar higher due to the pressure drop in the OH-DPD unit.

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### OH-DPD Description

OH = VID Fire-Kill series of semi concealed Low pressure Water mist OH nozzle series having automatic heat release.

OH-DPD = Dry Nozzle Unit (pipe).

OH-DPD units are delivered as one fully assembled and factory tested unit.

OH-DPD is a series of dry pipe units supplied in various lengths suited for any of the OH Automatic Low pressure Water Mist water mist nozzles from VID Fire-Kill for installation in Wet Pipe Systems, where the pressurized water pipes are located in frost free area, and the Low Pressure Water Mist sprayer with build-in automatic heat controlled release of water mist be installed in a space where temperatures below 0°C may occur.

The OH-DPD solution consists of a ½" wet pipe connection with a water stop-valve, on which a dry pipe is connected. At the end of the dry-pipe an OH Low pressure water mist water mist nozzle is connected. When the OH- Low Pressure Water Mist nozzle activates, the water stop-valve automatically opens to allow water to flow from the wet pipe system through the dry pipe and out through the OH Low Pressure Water mist nozzle.

The OH-DPD solution is available for all VID Fire-Kill model OH Automatic Low Pressure Water Mist nozzles for installation in pendent or horizontal position.

**Cautions:** *OH-DPD units with the OH-Nozzle are fast response Water Mist release element. Cautions should be taken not to cause physical impacts of any kind to the unit. OH-DPD units which have been dropped or suffered any other form for physical impact, regardless off no damages is to be seen and no leakage occurs may not be installed. It should be returned to the supplier to be checked by the manufacture.*

*Physical impact to OH-DPD units may at a delayed time cause the unit not to actuate Water Mist Spray due to heat of fire, or cause unit to actuate unintentionally.*

### When Receiving OH-DPD Units:

Upon arrival of the OH-DPD Units the unit should be checked that the product has the required length for the job, and that the OH-Water mist nozzle is the type and have the nominal release temperature as required for the space to be protected. Furthermore the receiver should check that the packaging is intact and that the OH-DPD unit has no visual defects from transportation.

**Caution:** *If packaging is damaged, and in case of visible damage to OH-DPD unit, the unit should be returned to the supplier, and another new OH-DPD should be installed.*

The Protection cap on OH-DPD Units should be left on until the unit is being installed. OH-DPD units should be stored in clean dry indoor location.

### Applications and locations:

The OH-DPD solution is suitable for fire protection in the following but not limited to type of locations and applications:

Freezer and cold store.

Garages and loading spaces and other spaces where frost of any reasons may occur.

**Cautions:** *OH-DPD units should NOT be installed in pipe systems or applications or on locations where vibrations may occur.*

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## Automatic Low Pressure Water Mist system

Model: **FIREKILL OH-DPD**



### Installation and maintenance:

The OH-DPD unit is a fully trackable unit. Each unit carries its own unit number, which are permanently marked on a spanner flat.

The installer of the OH-DPD unit should keep a recording on where the unit number is installed; to make it possible to track the unit if it should ever become necessary.

OH-DPD units are installed with the OH Low Pressure Nozzles. The model OH water mist nozzle should be installed in full accordance with location and nozzle orientation in the VID Fire-Kill installation guidelines for the particular OH nozzle type in request. The dry pipe part of the OH-DPD unit is located in an  $\varnothing 42+3$ mm clearance hole through the insulation. The Space between the pipe and the clearance hole shall be filled with insulation materials after the OH-DPD Unit has been fully fitted to the wet water supply pipes.

Make sure that the exposed length of the OH-DPD unit is in accordance with the specification in Table 1, Page 4.

**Caution:** *To avoid impurities inside pipe system, dust cap on the 1/2" OH-DPD Unit pipe connection thread should NOT be removed until the OH-DPD Unit are fully fitted through the clearance hole, just before sealant is applied on the 1/2" OH-DPD connection, and the 1/2" OH-DPD connection is screwed into the supply pipe-work.*

**Caution:** *Do only apply force onto the Key Width 36mm flats on the OH-DPD unit connection nipple, and only use a fork spanner for Key Width 36mm to connect the OH-DPD unit to the wet water supply pipes.*

**Caution:** *OH-DPD units which have been installed once; should never be re-installed. It should be returned to the supplier or VID Fire-Kill, for VID Fire-Kill to check and test the unit before the Unit is re-installed.*

### Commission of installed OH-DPD unit.

After installation, before water is applied to wet water supply pipe, location and orientation of OH-DPD Unit should be checked, and the OH-nozzle part of the OH-DPD unit should be visually checked for visual damages from the installation.

Hereafter the wet water supply pipes are filled with water, aired out and pressure tested in accordance with the relevant OH-Nozzle requirement. The OH-DPD Unit shall be checked for signs of water leakage. If water leaks from the OH-DPD unit, water is turned off, and the leaking OH-DPD unit is replaced with a new, and the leaking OH-DPD unit is returned to the supplier.

### Maintenance and service:

**Caution:** *OH-DPD units should never be attempted disassembled, serviced or repaired on site or in shop.*

*The OH-DPD Unit shall be returned to the supplier or VID Fire-Kill if there are signs of leakage or damaged parts.*

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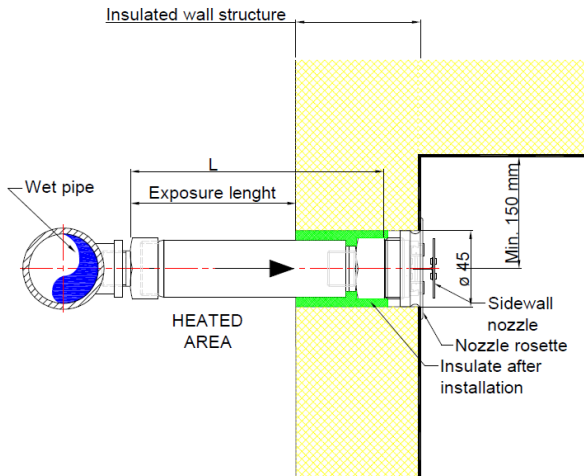
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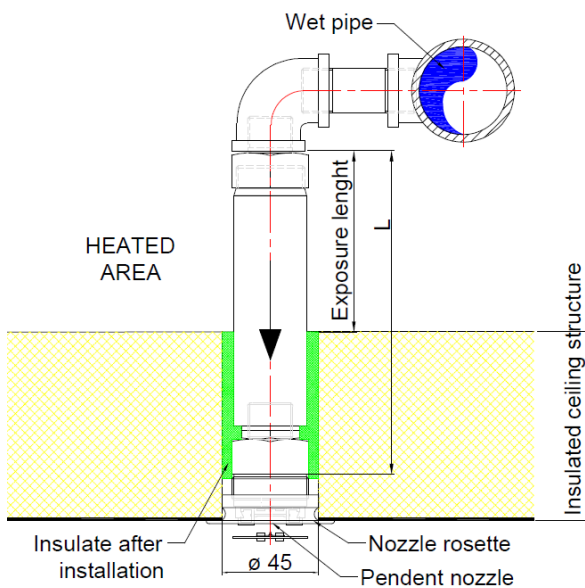


### Sidewall mounted nozzle

Sidewall nozzles are typically installed in areas where access to the ceiling is limited or where there is a requirement for protection of outdoor balconies.



### Pendent installation



### Contact

For further information on **FIREKILL OH-DPD** unit or similar products, please contact our sales department at [Sales@vidaps.dk](mailto:Sales@vidaps.dk)

**Table 1 Exposure length**

| Temperature exposed to water mist nozzle | Heated area temperature |          |          |
|--|-------------------------|----------|----------|
|  | 5 dg. C                 | 10 dg. C | 20 dg. C |
|  | Minimum exposure length |          |          |
| 5 dg. C                                  | 0 mm                    | 0 mm     | 0 mm     |
| -1 dg. C                                 | 0 mm                    | 0 mm     | 0 mm     |
| -10 dg. C                                | 100 mm                  | 25 mm    | 0 mm     |
| -15 dg. C                                | 200 mm                  | 75 mm    | 25 mm    |
| -20 dg. C                                | 300 mm                  | 100 mm   | 75 mm    |
| -25 dg. C                                | 350 mm                  | 150 mm   | 100 mm   |
| -30 dg. C                                | 350 mm                  | 150 mm   | 150 mm   |
| -35 dg. C                                | 400 mm                  | 200 mm   | 150 mm   |
| -40 dg. C                                | 450 mm                  | 250 mm   | 200 mm   |
| -45 dg. C                                | 500 mm                  | 300 mm   | 250 mm   |

### Ordering

When ordering the OH-DPD unit, the length has to include the thickness of the insulation and the exposure length.

The OH-DPD Unit is supplied in 5 standard lengths:

| Type       | L      | Weight  |
|------------|--------|---------|
| OH-DPD-150 | 150 mm | 0,70 kg |
| OH-DPD-300 | 300 mm | 1,15 kg |
| OH-DPD-450 | 450 mm | 1,50 kg |
| OH-DPD-600 | 600 mm | 1,85 kg |
| OH-DPD-750 | 750 mm | 2,20 kg |

In addition to calculating the length, the order has to define nozzle type and temperature rating. Weight includes the OH-Nozzle.

| Nozzle type       | K-factor (metric) | Min. pressure* | Max. height |
|-------------------|-------------------|----------------|-------------|
| OH-VSO            | 16,7              | 8 Bar          | 5,00 m      |
| OH-OS             | 16,5              | 10,5 Bar       | 5,00 m      |
| OH-L2             | 14,5              | 6 Bar          | 5,00 m      |
| OH-L1             | 13,5              | 6 Bar          | 2,50 m      |
| OH-L0             | 7,0               | 6 Bar          | 2,50 m      |
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| OH-SWC            | 23,0              | 6 Bar          | 2,50 m      |
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